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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,059	10/25/2000	Christopher K. Thomas	12026-2	1673
7590		02/09/2006	EXAMINER	
Bereskin & Parr		ALPERT, JAMES M		
Box 401		ART UNIT		
40 King Street West		PAPER NUMBER		
Toronto, ON M5H 3Y2		3624		
CANADA		DATE MAILED: 02/09/2006		

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/695,059	THOMAS, CHRISTOPHER K.	
	<b>Examiner</b>	<b>Art Unit</b>	
	James Alpert	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The following communication is in response to Applicant's amendment filed on 11/21/2005.

#### ***Status of Claims***

Claims 4,11-13,16 are original. Claims 1,8,21 are currently amended. Claims 2-3,5-7,9-10,14-15,17-20 are previously presented. Claims 1-21 are, therefore, currently pending.

#### ***Response to Arguments***

**With regard to the rejections made under 35 U.S.C. 103**, Applicant's arguments are moot in view of the new grounds of rejection, discussed below, and Applicant's request for allowance is respectfully denied.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. As amended, Claims 1,8,21 recite retrieving values for volume and number of transaction "*independently*". This is new matter and contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. As such, Claims 1,8,21 are rejected under §112, as are the claims depending therefrom.

***Claim Rejections - 35 USC § 103***

**With regard to Claims 1 and 2**, Bay teaches a method of for identifying aberrant behavior of a financial instrument comprising:

- (a-c) providing a computer for retrieving and recording the closing price, volume and number of transactions conducted for the financial instrument in a selected trading session,  
(Figure #1, Col. 1 lines 47-57, Col. 4 lines 25-35)
- (d) identifying a plurality of time periods, each of said time periods terminating with the trading session of the financial instrument immediately preceding the selected trading session;  
(Col. 2 lines 5-18)

Bay teaches that measurements of the number of trades and volume of shares traded as equivalent at (Col. 1, lines 55-60) so the Examiner interprets the applicant's claims broadly so that measurement of volume can also encompass a measurement of number of trades. Thus Bay teaches:

- (e) obtaining and providing in memory accessible by the computer, the average and standard deviation of the closing price, volume and number of transactions during each of the time periods, (Col. 3 lines 24-27, Figure #1)

Bay does not expressly teach a calculation of mean closing price in a similar manner as volume and number of trades, however price is obviously one of the important statistical measurements in analyzing stock performance. It would have therefore been obvious to modify Bay to include price calculations. The motivations is because price is an indicator of whether a stock is like to rise or fall in price along with volume, which is disclosed in Bay at (Col. 1 lines 16-18). Bay also does not disclose the use of a standard deviation measurement. Taking a standard deviation is an old and well-known practice when conducting statistical analyses. Lupien actually teaches the

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idea of measuring standard deviation as it relates to securities price fluctuations. See (Col. 9 lines 55-61). A standard deviation analysis is implied in the comparison charts of Bay, but it would have been an obvious modification to Bay to combine the teachings of Lupien at the time applicant's invention was made. The motivation for such a combination is to be more precise in measuring the general differences suggested by the data presented in Bay.

Further, Applicant has amended the claims such that a modification exists:

wherein the averages of the volume and number of transactions are obtained independently of each other, and wherein the standard deviations of the volume and the number of transactions are obtained independently of each other;

While Bay points out that over an extended sample, number of transactions and volume can be correlated closely to each other, Bay does not at all indicate that collecting data from both sources should not be considered. That is to say, Bay does not teach away from the limitation, but rather indicates, that it may be duplicative. The issue exists as to whether there is good reason to obtain these values independently. The answer would seem to be obvious and well-known: precision. While obtaining some measurements may normally be avoided, obtaining the values independently can provide an even more precise measurement than otherwise. Thus it would be obvious to modify Bay to include an independent measurement of volume and number of trades so as to further increase precision.

Bay further teaches:

- (f-h) determining whether the closing price, volume and number of transactions differs from the average of the corresponding component during each of the time periods  
(Col. 5 lines 12-27, Col. 5 lines 41-50)

Bay as mentioned does not teach measuring closing price average, nor conducting a standard deviation analysis in order to gain precise degrees of what is seen in the graphical representation of data. However, these are non-obvious modifications to the method presented in Bay as described above, under (e). Thus, a Bay-Lupien combination teaches further determining if the difference between the values of the selected trading period and the averages over the measure time periods is of a selected number of standard deviations.

The Examiner interprets the word “flag” broadly, such that the bar graphs described in Bay at (Col. 3 lines 56-65) read on the limitations of the last part of Claim 1(f) and Claim 1(h-i). As described at (Col. 4 lines 4-10), the bar graphs indicate the same information as the “flags” described by applicant, and are displayed such that patterns of aberrance are easily recognizable. See Figure 1, Item 27 as opposed to Figure 1, Item 29. Thus “flags” are automatically recorded, counted, and identified as aberrant according to a Bay-Lupien combination.

**With regard to Claim 2**, Bay discloses that by using his method, “trends are readily seen by comparing when comparing historical data to current data” (Col. 3 lines 33-35).

Further, the rectangular and wick-like structures comprising Bay’s graphical representation (broadly interpreted to be “flagging”) are,

“selected to provide an easily distinguishable relationship between historical average volume and current volume” (Col.3 lines 46-48)

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Broadly interpreted then, Bay teaches the method further comprising:

- (j) selecting a threshold value corresponding to an expected total number of aberrant flags;
- (k) calculating the difference between the total number of aberrant flags and the threshold value; and
- (l) recording an overall financial instrument aberrant flag if the magnitude of the difference in step (k) is sufficiently large.  
(Col. 3 line 24 – Col. 4 line 19)

**With regard to Claim 3**, Bay teaches a method wherein:

the threshold value corresponds at least in part to the total number of possible aberrant flags that could be recorded in steps (f) and (g).  
(Col. 3 line 24 – Col. 4 line 19)

**With regard to Claim 4**, Bay teaches a method wherein:

the financial instrument is sold on at least one market, the at least one market has market indexes that are analogous to the closing price, the volume and the number of transactions, and wherein the selected number of standard deviations depends at least in part on standard deviations of the market indexes for the time periods. (Col. 3 lines 2-9)

**With regard to Claim 5-6**, Bay teaches that measurements of the number of trades and volume of shares traded as equivalent at (Col. 1, lines 55-60) so the Examiner interprets the applicant's claims broadly so that measurement of volume can also encompass a measurement of number of shares traded. In this regard, Bay teaches the method wherein:

for each time interval, an aberrant flag is recorded if the differences between the number of transactions for the selected trading session and average number of transactions, and the volume for the selected trading session and the average volume, respectively, are sufficiently large and the number of transactions and the volume of trading for the selected trading session are greater than the average numbers of transactions and the average volume, respectively.  
(Col. 3 lines 40-51)

**With regard to Claim 7**, Bay's method shows a graphical representation of the "flags" as described in Claim 1, which can be seen on a day-by-day basis over a number of different periods, or even in interval other than days. See (Col. 2 lines 40-42) and (Col. 4 lines 36-40). As such, the graphical representation depicting differences between average and current value can be seen for several different "selected trading sessions". Thus, in a broad interpretation, Bay teaches the method further comprising:

- (m) calculating an average number of aberrant flags for the financial instrument over a selected number of trading sessions immediately prior to the selected trading session, and
- (n) comparing the number of aberrant flags in the selected trading session with the average number of aberrant flags; and
- (o) identifying the existence of an overall financial instrument aberration if the comparison in step (n) results in a difference above a threshold value,

**With regard to Claim 8**, this claim is rejected in the same way as Claim 1, as the elements of the claim are essentially the same as in the prior claim.

**With regard to Claim 9**, this claim is rejected in the same way as Claim 2, as the elements of the claim are essentially the same as in the prior claim.

**With regard to Claim 10**, Bay teaches the method wherein:

the expected variations are selected depending on the averages and standard deviations of the values of the parameters over the time periods.  
(Col. 3 line 24 – Col. 4 line 19)

**With regard to Claim 11**, Bay discloses that any variety of time periods can be used when implementing his method of comparing historical data with current data.

Therefore, Bay inherently teaches the method wherein:

at least one time period is at most 10 days long and at least one other time period is at least one year long. (Col. 2 lines 40-42; Col. 4 lines 36-40)



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**With regard to Claim 12**, Bay teaches the method further comprising:

Reporting the presence of any differences that are aberrant.  
(Col. 4 lines 3-11)

**With regard to Claims 13-14**, these claims are rejected in the same way as Claims 1 and 2.

**With regard to Claims 15**, this claim is rejected in the same way as Claim 3.

**With regard to Claims 16**, this claim is rejected in the same way as Claim 4.

**With regard to Claims 17**, this claim is rejected in the same way as Claim 5.

**With regard to Claims 18**, this claim is rejected in the same way as Claim 6.

**With regard to Claims 19**, this claim is rejected in the same way as Claim 7.

**With regard to Claims 20**, Bay does not expressly teach the method wherein:

the parameters includes the number of transactions, the closing price and the volume for the financial instrument in a selected trading session.

Bay does disclose, however, that measurements of the number of trades and volume of shares traded as equivalent at (Col. 1, lines 55-60) so the Examiner interprets the applicant's claims broadly so that measurement of volume can also encompass a measurement of number of shares traded, and thus Bay inherently teaches parameters including volume and number of transactions.

Although Bay does not expressly teach closing price as a parameter in a similar manner as volume and number of trades, price is obviously one of the important statistical measurements in analyzing stock performance. It would have therefore been obvious to modify Bay to include closing price as a parameter in calculating the differences described in Claim 8(f). The motivations to modify Bay is because price is

an indicator of whether a stock is like to rise or fall in price along with volume, which is disclosed in Bay at (Col. 1 lines 16-18).

**With regard to Claims 21**, this claim is rejected in the same way as Claim 8, which is essentially the same as Claim 1.

### ***Additional Comments***

**With regard to Claim 8**, Applicant comments extensively about the time periods in Figure #1 relating solely to ½ hour time periods during the trading day. Applicant fails to consider that Figure #2 depicts trading activity for several weeks at a time on the “x” axis. It would be easy to see how historical data for the previous week is easily measured against the current trading data. This information is also analyzed in the close- up view produced by Figure #1A, which show summary data, including preceding day, other historical data, and current data. Finally, please note that Bay expressly discusses that the invention can be presented in any desirable form, for example, daily projections, weekly projections, etc. (Col. 4, lines 36-40). Bay continues,

It is not intended that the invention be limited to the particular format shown in Figs. 1 and 2 but that it be interpreted in the full spirit and scope of the amended claims.  
(Col. 6, lines 17-20)

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

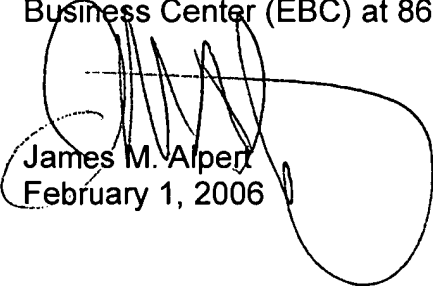
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Alpert whose telephone number is (571) 272-6738. The examiner can normally be reached on M-F 9:30-6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571) 272-6747. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James M. Alpert  
February 1, 2006



HANI M. KAZIMI  
PRIMARY EXAMINER